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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,803	11/19/2001	Nicolas Pierre Georges Certain	2-1032-178	7350

803 7590 03/09/2005

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DES MOINES, IA 50309-4076

EXAMINER

KING, BRADLEY T

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/992,803

Applicant(s)

CERTAIN, NICOLAS PIERRE  
GEORGES

Examiner

Bradley T King

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-15 and 17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-15 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/10/2004 has been entered.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-4, 6-14, 15 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 15 recite "wherein axial length". This limitation is awkward and confusing.

Claims 1 and 15 further recite "the axial length of the sleeve". It is not clear which of the two previously recited sleeves corresponds to "the sleeve".

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Byrnes et al (US#5449152).

Byrnes et al discloses all the limitations of the instant claims including; at least one set of two tubular cylindrical sleeves of viscoelastic material (figure 5) fitted one inside the other and substantially coaxial, with the interposition of a rigid cylindrical and substantially coaxial intermediate ring so that one of said two sleeves is an internal sleeve secured by an internal cylindrical face belonging to an external cylindrical face of an internal rigid ring and by an external cylindrical face to an internal cylindrical face of the intermediate ring separating the internal sleeve from the other sleeve of the pair of sleeves, which is an external sleeve secured, by an internal cylindrical face, to an external cylindrical face of the intermediate ring and, by an external cylindrical face, to an internal cylindrical face of an external rigid ring, the internal ring and the external ring being secured, respectively to an internal armature and to an external armature, each of which is connected to a respective one of two connecting members for connection of the parts.(also note Byrnes et al teach multiple shims between plies). Wherein each of two annular axial end faces of each of the sleeves is shaped as a meniscus delimited by

a curved free surface with a concave side facing outwards along said axis; and wherein said axial length of each sleeve is measured between bottoms of the menisci of the two annular end faces of the sleeve (see figure 5). Regarding the recited equation, from the instant specification it appears that the equation merely requires that the stiffness of both layers be substantially equal. Byrnes et al is directed towards this same goal and further recognizes the equation for stiffness (column 3). Therefore, Byrnes et al disclose a damper which substantially follows the required relation.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Byrnes et al (US#5449152).

Byrnes et al disclose all the limitations of the instant claims with exception to the particular type of elastomer and loss angle. Material selection is well known and routine in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a material with the appropriate characteristics to maximize damping and achieve the required load capacities.

Claims 1, 3-10, 13, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Byrnes et al (US#5449152) in view of De Antonio et al (US#5205029) and the admitted prior art of page 2, lines 13-18.

Byrnes et al disclose a device including; at least one set of two tubular cylindrical sleeves of viscoelastic material (figure 5) fitted one inside the other and substantially coaxial, with the interposition of a rigid cylindrical and substantially coaxial intermediate ring so that one of said two sleeves is an internal sleeve secured by an internal cylindrical face belonging to an external cylindrical face of an internal rigid ring and by an external cylindrical face to an internal cylindrical face of the intermediate ring separating the internal sleeve from the other sleeve of the pair of sleeves, which is an external sleeve secured, by an internal cylindrical face, to an external cylindrical face of the intermediate ring and, by an external cylindrical face, to an internal cylindrical face of an external rigid ring, the internal ring and the external ring being secured, respectively to an internal armature and to an external armature, each of which is connected to a respective one of two connecting members for connection of the parts.(also note Byrnes et al teach multiple shims between plys). Wherein each of two annular axial end faces of each of the sleeves is shaped as a meniscus delimited by a curved free surface with a concave side facing outwards along said axis; and wherein said axial length of each sleeve is measured between bottoms of the meniscuses of the two annular end faces of the sleeve (see figure 5). Regarding the recited equation, from the instant specification it appears that the equation merely requires that the stiffness of both layers be substantially equal. Byrnes et al is directed towards this same goal and

further recognizes the equation for stiffness (column 3). Therefore, Byrnes et al disclose a damper which substantially follows the required relation. Byrnes et al lack the explicit disclosure of the elastomer being preloaded and the relative lengths of the faces of the sleeves (which corresponds to extent of the meniscus shape). Preloading elastomeric bearings is well known in the art and further taught by De Antonio et al for elastomers in the same environment. It would have been obvious to one of ordinary skill in the art at the time the invention was made to preload the elastomeric layers of Byrnes et al as taught by De Antonio et al to increase the service life of the device. The admitted prior art of page 2, lines 13-18 teaches the effects of the meniscus shape in reducing localized stress in similar devices. It further would have been obvious to one of ordinary skill in the art at the time the invention was made to use a greater degree of meniscus shape resulting in both axial lengths of the internal cylindrical face of each of the sleeves and axial length of the external cylindrical face of the sleeve are longer than the axial length of the sleeve as measured between bottoms of the corresponding menisci to further reduce localized stresses as taught by the admitted prior art, thereby increasing the service life of the device of Byrnes et al and De Antonio.

Regarding claims 7-9, the method of preloading the layers are equivalent methods which result in substantially the same final product.

Regarding claim 4, Byrnes et al, as modified above, disclose all the limitations of the instant claims with exception to the particular type of elastomer and loss angle. Material selection is well known and routine in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a material

with the appropriate characteristics to maximize damping and achieve the required load capacities.

Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Byrnes et al (US#5449152), De Antonio et al (US#5205029) and the admitted prior art of page 2, lines 13-18, as applied to claim 1 above, in further view of McGuire (US#6092755).

Byrnes et al, De Antonio et al (US#5205029) and the admitted prior art of page 2, lines 13-18, disclose all the limitations of the instant claim with exception to a radially thicker part on the outer ring to which the armature is connected. McGuire teaches an outer ring with a thicker part 29 allowing attachment to an armature 70. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the mounting structure taught by McGuire in the device of Byrnes et al, as modified above, to allow quick disassembly of the device and access to the internal surfaces of the damper.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Byrnes et al (US#5449152), De Antonio et al (US#5205029) and the admitted prior art of page 2, lines 13-18 in further view of Olsen (US#6328293).

Byrnes et al, De Antonio et al (US#5205029) and the admitted prior art of page 2, lines 13-18, as applied to claim 1, disclose all the limitations of the instant claims with exception to the details of the end connections of the device. Olsen teaches a similar

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linkage system with threaded clevises having locking nuts 23c and opposite hand threads such that the linkage can be adjusted in place. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize connecting structure such as taught by Olsen in the damper of Byrnes et al, De Antonio et al (US#5205029) and the admitted prior art of page 2, lines 13-18 to simplify installation and maintenance.

### ***Response to Arguments***

Applicant's arguments filed 12/10/2004 have been fully considered but they are not persuasive.

The passages of De Antonio et al noted by applicant describe the prior art methods of preloading. Note that De Antonio teaches preloading of the device by deforming the outer sheath of the assembled adapter, thereby deforming the inner cylindrical ring and preloading the elastomeric sleeve (column 1, lines 50-68). It is maintained that this teaching is applicable to the device of Byrnes and the rejections are proper.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley T King whose telephone number is (703) 308-8346. The examiner can normally be reached on 11:00-7:30 M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on (703) 308-0830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BTK

*Robert A. Siconolfi* 3/7/02  
ROBERT A. SICONOLFI  
PATENT EXAMINER